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Abarta Pandey

GUIDE TO INTERNATIONALISATION IN THE NEPALESE ENERGY MARKET

TURUN AMMATTIKORKEAKOULU
TURKU UNIVERSITY OF APPLIED SCIENCES

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Abarta Pandey

TURUN AMMATTIKORKEAKOULU THESIS

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In today's market internationalization is one of the essential factor for firms to expand. This thesis researches the opportunities for international energy SMEs to internationalise in a developing nation, Nepal.

The objective of the thesis was to provide a guide about energy sector in Nepal and provide information to potential international energy firms about the available opportunity to internationalize.The thesis analysed the present situation of the market with challenges and opportunities present in it. In relation to different internationalization theories, the thesis will also presents the best possible way of entering and internationalizing in the energy market in Nepal for international SMEs.

The research was conducted with the need for internationalise SMEs to internationalise and the need of energy for Nepal to progress on its development. The research starts with the why this thesis was written and the introduction to the Neplese where there is a lot of opportunities and demand for energy is very high. The research investigates the best ways of interantionalisation for the SMEs, things to consider before making the move and the possible barriers in the process.

The thesis has used the Upsala model, network approach and resource based approach of internationalization as the theories to guide through the process of internationalizing in Nepal. The methodology used for the research was mixed method research with the implementation of archival and survey strategy. The survey was conducted to know the major obstacles in the target market and its impact. The results from the survey along with the internationalization theories was able to draw the conclusions:

The appropriate method of entering the energy market in Nepal would be through the combination of network based approach and resource based approach of internationalisation. The survey revealed the major obstacles in the market in the form of Political instability and corruption.

KEYWORDS:

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LIST OF ABBREVIATIONS (OR) SYMBOLS

HTML	HTML, which stands for Hypertext Markup Language, is the predominant markup language for web pages.
UNESCO	The United Nations Educational, Scientific and Cultural Organization.
UN	United Nations
NEA	Nepal Electricity Authority
GON	Government of Nepal.
SAARC	South Asian Association for Regional Cooperation.
GDP	Gross Domestic Product
FINEST	Finland Nepal Energy Sustainable Tea Project
SWERA	Solar and Wind Energy Resource Assessment
U model	Uppsala Model
TCA	Transaction Cost Analysis
IMP	International Marketing and Purchasing Group
FDI	Foreign Direct Investment

1 INTRODUCTION

1.1 Why this topic?

Before moving to Finland in September 2010 for further studies I lived in the capital city of Nepal, Kathmandu with 14 hours of power cut per day. At that time it did not feel like a big problem. Life seemed to be normal, all the people had adapted to the system. There were difficulties and inefficiency but everything seemed normal.

However, after moving to Finland life was certainly better with uninterrupted electricity supply. I began to realize the problem existing in the economy due to the lack of energy. I started to see the picture more clearly and the impact power has in our lives from economic to social perspective. I also imagined the challenges l would face after I return back to Nepal. Then and there I decided to do a research, find possible solutions and also answer the question: How can a country with such a huge potential in production of energy have power cut for up to 18 hrs/day.

1.2 Background

With a population of 31million, Nepal is a Himalayan county situated in the southern part of Asia between India and China. In 2012, Nepal's annual GDP was estimated over $17,921 billion (IMF Report, 2012). Nepal is an agrarian country with agriculture accounting for 36, 1% of the national GDP (World Bank, Nepal at glance, 2012).

Despite having enough resources for energy production and room for development Nepal remains one of the poorest country in the world. One of the main reasons for this has been the political instability in the country. It has been struggling to insurrect the legacy of 10-year Maoist insurrection. Although the

century old monarchy was abolished in may 2008 and the country moved to democracy the political situation has not made any progress. In 2013 there has been a political deadlock adding to the political stability. Due to this foreign donors are hesitant to fund the development projects to Nepal which according to the UN accounts for about 60% of the government's budget (http://www.fncci.org/text/budget.pdf). These funds are mainly delegated for the purpose of development and sustainability. The Government of Nepal (GON) has been making efforts for development with more support for sustainable projects.

Nepal has a valuable and sensitive ecology and therefore it is important to preserve the forested areas in the mountainous regions. Deforestation can lead to landslides which can block the logistic routes in and out of the area. These facts also indicate that it would be beneficial to make the use of firewood more efficient and also to seek new sustainable energy sources for the industries in the area.

Nepal has been making efforts to promote and utilize the renewable energy. In November 3, 1996 the GON established an institution, Alternative Energy Promotion Centre (AEPC) operating under the Ministry of Science, Technology and Environment with the objective of renewing and developing the renewable/alternative energy technology in Nepal (http://aepc.gov.np/).

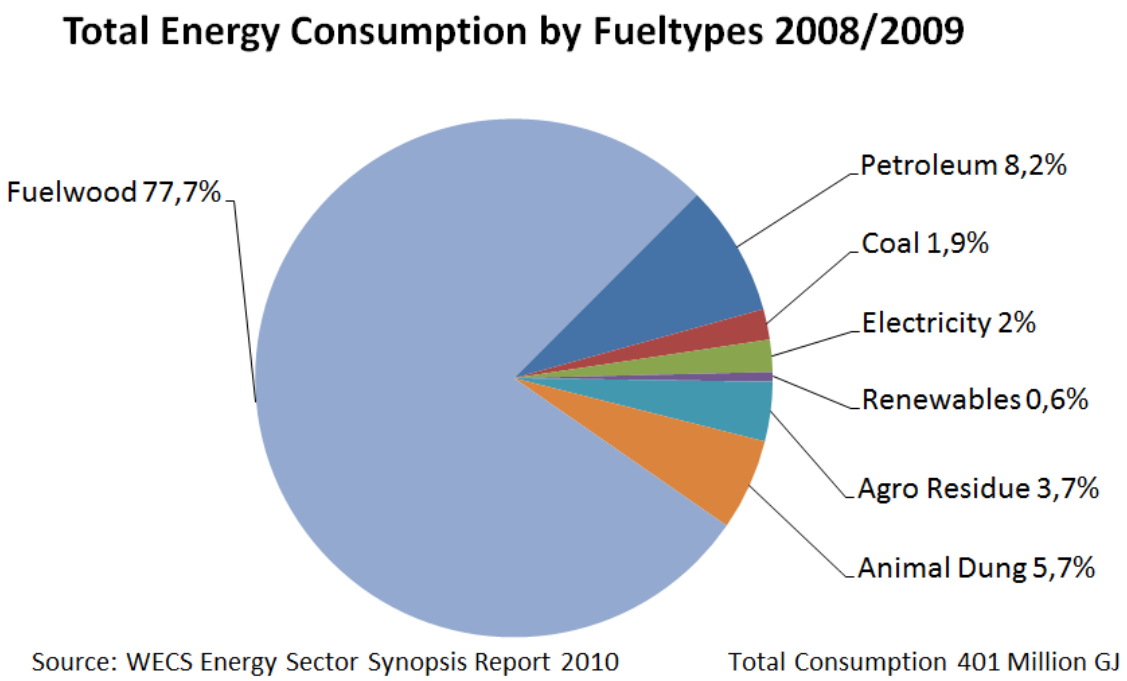


Fig 1: Energy consumption in Nepal by Fuel types (WECS Energy Sector Sypnosis Report, 2010)

Figure 1 shows the trend of energy used according to the fuel types in Nepal from 2000-2008/9. The major energy source is clearly indicated as fuel wood, a traditional source of energy. The share of traditional source of energy in the energy sector is 87% with commercial energy like petroleum and electricity accounting for the remaining 13%. However in recent years there has been a growing trend in commercial fuel along with alternative energy fulfilling the energy demand (Secretariat, 2010).

1.3 Objectives and research questions

The main purpose of this thesis is to provide a guide about energy sector in Nepal and provide information to potential international energy firms about the available opportunity to internationalize. In relation to different internationalization theories, the thesis will also present the best possible way of internationalizing for the energy companies. In order to achieve the objective the thesis will answer the following research questions.

- What is the present situation of the energy industry in Nepal?
- What are the major challenges and the opportunities in the energy industry in Nepal?
- What are the appropriate ways of penetrating the Nepalese energy market for the international firms?

1.4 Thesis Structure

The thesis structure briefly explains the chapters included in the study and its contents.

Energy Sector in Nepal

The section 2.0 covers the energy sector in Nepal and it explains the background and the present situation of the energy sector of Nepal with the potential of renewable energy.

Literature Review

The section 3.0 covers the literature review and it explains and relates the theories of Uppsala model and internationalisation theories with the practical situation of energy market in Nepal and opportunities in the energy sector for international SMEs.

Methodology

The section 4 covers the methodology part and explains how the research is conducted for the thesis including method of data collection and analysis.

Analysis

The section 5 covers the analysis part where the data collected from the research are analysed along with the results of the survey. The conclusion is drawn in relation to the results and theories mentioned.

Conclusion

Section 6 covers the conclusion and explains the overall result of the thesis. It provides suggestion for implications and further research.

2 ENERGY SECTOR IN NEPAL

Currently Nepal is in a state of energy crisis going in the country with the population in the capital city, Kathmandu experiencing up to 14 hours of power cut per day.

2.1 Background

Nepal has no known oil, gas or coal deposits. All commercial fossil fuels (mainly oil and coal) are either imported from India or from international markets routed through India. Fuel imports absorb over one-fourth of Nepal's foreign exchange earnings. The country is more dependent on agriculture which employees 75% of the work force followed by 18% services sectors, and 7% manufacturing based work with more than 46% of the whole population unemployed (World Bank, Nepal at glance, 2012). Water is an important natural resource for Nepal which represents a source of potential wealth. According to the UN, Nepal’s hydropower has potential of generating as much as 44,000 MW from 66 hydro project sites (http://www.nepalmonitor.com/2009/01/fdi_in_nepals_hydropower.html).

Apart from the hydro projects Nepal also has a potential for generating energy through solar and wind technology.

Nepal has a great potential for generating Solar Energy. The country lies in the 30 degree in the northern latitude with over 300 days of sunshine annually (AEPS, GON, 2013). According to the AEPC (2013), Nepal has a potential of generating as much as 26,000 MW of energy through solar power which is environmentally beneficial as well. Although Nepal started its journey in the renewable energy in 1993 through a company named Lotus energy and the number of firms involved in the sector reached 60 by 2007, it has not been able to make a significant impact on the energy sector until now.

The solar energy potential in Nepal is estimated to be about 26 million MW. Currently there are two types of solar energy technology in the country: solar thermal systems and solar photovoltaic (PV) systems. However, because of the high cost, this technology is too expensive for most people (National Energy Situation Survey Report- Focus on Renewable Energy & Poverty Reduction, 2005). The lack of government policies about solar energy is one of the reasons for the lack of urbanite interest. People have to see the financial benefits of it, and so the government has to make it financially lucrative or generate individual interests on how citizens can be motivated to participate in this project.

Wind energy is created by energy from the sun that reaches the lower atmosphere. Differences in atmospheric temperatures and the earth's rotation cause air to move generating the wind. Depending on climatic conditions and surface topography, wind varies significantly in intensity over a day, a season, or a year. Due to the tricky infrastructure and lack of sufficient data it is not sufficient to make a realistic wind data in Nepal. However, according to the report from Upreti and Shakya the potential wind power in the country is about 6074sq. km with wind power density greater than 300 watt/m^2. (Shakya, 2009).

A study done by Solar and Wind Energy Resource Assessment (SWERA, 2008) states, the total area of 6074 sq. km that was taken into account for the study 10% is commercially viable under the existing conditions of grid connectivity (15Km buffer zone from existing NEA national grid line), thus totalling the feasibility amount to 3000MW. It shows that Annapurna Conservation Area alone covers 143 sq. km above Wind Power Density (WPD) of 300 Watt/ m^2**,** with the site location 10Km away from the grid. And with 5MW installed per sq. km wind, the area can yield 716MW.

The potential of wind energy was discovered in 1980's when a 10kw wind turbine was installed in Kagbeni, Mustang by the Nepal Electricity Authority in 1985. Due to the lack of maintenance and proper anticipation the wind turbines were broken by high winds. Wind energy is still in use although in small quantities and with low capacity in more than 10 districts. The potential of wind energy have not only being recognized by the government but international

energy companies as well. According to GON, Charus Development, Suzlon Energy Limited (India) and AGA Middle East Pvt. Ltd (Hong Kong, Singapore) have submitted proposals to the government of Nepal for generating more than 200MW wind energy.

2.2 Current Energy Situation in Nepal

Nepal's economic and social development is being hampered by its inadequate energy supply. The hydropower potential of Nepal's river is 83000 MW, out of which 25% is potentially available for development (WECS 1996). The total installed hydroelectric generation capacity is 586 MW (NEA 2002). Thus less than one percent of the proven potential is now utilized. Fuel wood is the predominant energy carrier, counting for more than 68%per cent of consumption (USAID Saari/EI, 2003). However, its use is inefficient and poses a threat to the country's forests. At the same time, the indoor pollution caused by open hearths in homes presents a hazard to health. Electricity is mostly available in urban areas and the hydropower resources must be exploited in an environmentally sound manner. The energy generated should benefit small and micro businesses while improving the standard of living and the health of local people. It should contribute to the protection of forested areas and, by being fed into the national grid, should bring new revenue to the region.

Nepal is in the midst of quite a problematic energy crisis, and the government is doing its part to try and alleviate the situation. According to the World Bank 2010 report, only 43.6 percent of the total population of Nepal has access to electricity, the total population of Nepal being about 30.49 million (http://data.worldbank.org/country/nepal). Due to severe troubles (the leaking of electricity, alleged corruption and revenue deficits), instead of producing a required 1200 MW of electricity per day, Nepal have only been able to produce 750 MW. This has led to daily power cuts which last for several hours (Renewable energy for rural livelihood, n.d.).

According to Census Report, 2012, Central Bureau of Statistics the development of Nepal has been in decline primarily due to the energy in particular electricity. The same report states that out of 5,4 million households

64% use firewood for cooking, with 21% using LPG gas, 10% using cow dung, 2,4% biogas and 0,1% use electricity. It is unfortunate that still 64% of the household are using firewood as their major energy source is shows the lack of supply of energy in the Nepalese energy market. Less than 30% of the rural households are connected to the national electricity grid. In add to current energy crisis, the urban households connected to the electrical grid witness 14-16 hours of power cut per day.

2.3 Nepal Electricity Authority (NEA)

In August 1984, through the merger of Department of Electricity of Ministry of Water Resources, Nepal Electricity Corporation and related boards under the Nepal Electricity Authority Act 1984 Nepal Electricity Authority was formed (NEA). NEA was formed to solve the problems associated with this fragmentized electrical organization. The multiple organizations had problems associated with overlapping and duplication of works. These individual organizations were merged to achieve efficiency and to provide reliable services. The primary objective of NEA is to generate, transmit and distribute adequate, reliable and affordable power by planning, constructing, operating and maintaining all generation, transmission and distribution facilities in Nepal's power system both interconnected and isolated.

Nepal Electricity Authority is a government owned monopoly utility company which serves only about 15% of the population. With the local population facing the big problems due to the energy crisis there is a huge potential in the energy sector in Nepal. The primary objective of NEA is to generate, transmit and distribute adequate, reliable and affordable power by planning, constructing, operating and maintaining all generation, transmission and distribution facilities in Nepal's power system both interconnected and isolated. In addition to this NEA also operates as an advisor to the GON on energy related issues along with tariff structure in the energy sector.

3 BARRIERS FOR INVESTMENT IN NEPAL

Foreign Investment is a major source of income for Nepal contributing to its development. Efforts have been made continuously by the government of Nepal to attract foreign investment. According to the GON, Annual Fiscal Year 2010-2011, there were 2,108 foreign investment projects in Nepal accounting for approximately US$2, 61 billion. Likewise the government opened doors for the foreign investors in the Energy sector as well with the Ministry of Energy willing to award license to foreign companies through a competitive process. However despite all these efforts there remain significant barriers. These barriers are repelling the potential foreign investors from Nepal. These barriers are effecting investment in every industry including the energy industry. The main barriers for foreign investment in Nepal are political instability, corruption and lack of infrastructure.

3.1 Political Instability

Nepal has been ruled by monarchs or a ruling family in most of its modern history. Although democracy was introduced in Nepal in 1991, eventually after frequent change of government monarchy was re-established with its latest abolition taking place in April, 2006. This abolition was led by the 10 year Maoist insurrection which led to the death of 10,000 people (http://www.bbc.com/news/world-south-asia-12511455). A peace deal was struck and an election was held in April, 2008 with Maoist emerging as a leading party with them taking charge of the government. However, after that Nepal has seen six governments with little improvement. After 5 years of achieving democracy and being ruled by various parties Nepal still does not have a constitution.

Even though there were frequent changes in the government, the GON was maintaining its policies for encouragement of foreign investment. The monopolies in markets such as telecommunication, civil aviation and energy were opened for private sectors. The license and regulations were simplified allowing foreign ownership in different percentage depending on the sectors

they were operating in. All the governments were consistent with the policy of liberal trade and investment policies. However the political instability has created an uncertain environment for foreign investment.

3.2 Corruption

Corruption is the wrong doing on the part of authority or powerful party through the means that are illegitimate, immoral or incompatible with ethical standards. It is often associated with bribery (businessdictionary.com). According to the Transparency International Corruption Perception Index 2013, Nepal ranks 116 among 177 countries. Corruption has always been a big problem in Nepal. Corruption in Nepal has acted as one the main problem for economic reforms, accountability, transparency and good governance. It is present in both the public and private sector.

The history of corruption dates back a long way with King Prithivi Narayan Shah(1768-1775), also known as the founder of the nation who stated “Both bribe takers and givers are the worst enemies of the nation” (http://www.humanrights.asia/opinions/columns/AHRC-ETC-011-2012). Nepal has been experiencing corruption since then and though efforts are being made to stop corruption little progress can be tracked from Transparency International Corruption Perception Index. With the trend of politicisation of crime and corruption and increased power of political parties have encouraged corruption. Although Nepal has an independent Commission for Investigation of Abuse of Authority (CIAA) as a supreme constitutional body for corruption control it is still influenced by the government and its members.

3.3 Lack of Infrastructure

Infrastructure is the basic physical and organizational structure and facilities (e.g. buildings, roads, power supplies) needed for the operation of society and enterprise (Oxford Dictionary). Nepal lacks behind in the development of infrastructures. There are various infrastructures among which the thesis will explain briefly the infrastructure related to the energy industry. The lack of

power is mentioned clearly in the introduction, there is also lack of roadways which has been a big problem in the process of development. The lack of technological infrastructures is also another big problem in Nepal.

Nepal has a tricky geography with 3 major kinds of landscapes Mountain, Hill and Terai (Flat/plain) region. These ecological belts runs east to west intersected vertically by major rivers flowing from north to south. The Mountain region covers the northern part of Nepal with eight of the world's top 10 highest peak including Mount Everest which stands at 8848m. The Hilly region varies from 800 to 4000m in altitude with sub tropical river valleys and hills. The Terai region covers the southern region with lowland plains.

This tricky geography has made the construction of infrastructure difficult in Nepal. For example the hills make it very difficult to construct roads to connect with many rural areas. The World Bank Country Profile Report, 2006 only 43% of the rural population of Nepal has access to strategic road network. This lack of connection has led lack of exposure to the outer world in these areas. They lack energy and use traditional ways to produce energy. There is no electricity or electrical grid present in these areas.

3.4 Lack of Technology

Nepal is still predominantly rural with a need for development in terms of technology. Lack of availability of sufficient skilled labor force and lack of technology transfer are major reasons behind insufficient development in the field of technology. Even though there has been significant improvement it has not been sufficient. The main technological infrastructures lacking in the energy sector is the lack of knowledge, information, skilled labor and technical knowhow (Khanal, 2009).

The major trade and FDI related acts in Nepal are FDI and One Window Policy of 1992, Foreign Investment and Technology Transfer Act of 1992, Privatization Act of 1994 and Industrial Enterprises Act of 1992.

The Industrial Enterprise Act emphasizes on simplification of procedures, transparency in implementation and improvement in the productivity through the up gradation of technical knowhow and efficiency of the industries to compete in the free and competitive world market by utilizing the comparative advantages of the country with minimum adverse effect on environment (Khanal, 2009).

The Foreign Investment and One Window Policy were brought into use with the following aims:

•To build a strong and dynamic economy by generating additional opportunities for income and employment through expanding productive activities.

•To increase the participation of the private sector in the process of industrialization.

•To increase productivity by mobilizing internal resources and materials unproductive sectors and by importing foreign capital, modern technology, management and technical skills.

•To increase the competitiveness of Nepalese industries in international markets

Technological changes are the main stimulus for economic growth in Nepal. FDI is one of the cheapest methods of introducing new technology. Nepal has been falling behind in this sector not being able to attract FDI. Attraction of FDI for new technology is an important need to achieve economic growth. There are 1,423 firms operating with foreign investment with only 32 companies in Energy sector (CBS Nepal, 2007/08).

4 LITERATURE REVIEW

The literature review will initially explain the basic concept of internationalization for the readers. Furthermore it explains the Uppsala model and modes of entering the foreign market. It concludes with the relation between the theories

and the research with it implications providing the potentially best path for international SMEs to internationalize in the Nepalese energy market.

4.1 Internationalization

Internationalization is a hot topic in today's world. It is an intensively researched theory from various perspective such as organizational theory, marketing, strategic management, international management and small business management. Economically internationalization refers to a process of increasing involvement of enterprises in international market (Susman 2007). However there is no exact definition of internationalization, there are various theories explaining its concept and meaning in different stages. In general terms internationalization refers to the geographical expansion of economic activities. The final "stage" in internationalization deals with the rise of global firms and the existence of so called "Born Global" (Madsen&Servais, 1997).

Internationalization helps a country like Nepal through access to international financial and capital markets with maximum opportunities for foreign investors. It enhances competition within the country which leads to decrease in capital cost and increase in investments. This helps to improve the quality, efficiency and broadness of domestic market. The internationalization would lead to the economic growth of the country. The thesis takes into account the Uppsala model of internationalization and a network approach to internationalization to relate and analyze it with the research.

4.2 Uppsala Model of Internationalization

The Uppsala model also known as the U-model is a theory that explains how firms gradually intensify their activities in foreign market. The model was originally developed in 1975 by Jan Johanson and Finn Weidersheim Paul which was then refined by Jan Johanson and Jan-Erik Vahlne in 1977 through an empirical research on Swedish companies in the international market and the database of Swedish subsidiaries abroad. According to this theory, firms approach towards foreign territory slowly through incremental process. It

assumes that firms gradually accumulate international and market knowledge through time and experience (Jeffrey W. Overby, 2001).

Figure 2: U - Model(Johanson&Vahlne, The Internationalization process of the firm – a model of knowledge, 1977)

As shown in the figure above U model comprises of four concepts highly valuable in the internationalisation process. The four concepts are: Market commitment, commitment decisions, current activities and market knowledge. Market knowledge and market commitment are mentioned as the static aspect and are suppose to impact on how activities are carried out and commitment towards these activities, which in turn affects the market knowledge and commitment. The model therefore suggests that a firm is to invest in one (or a few) neighbouring markets and then cautiously and successively, after having generated knowledge and experience, expand to international markets further away from the home country (Forsgren, 2002).

The U model was revisited by Johanson and Vahlne in 2007 in the light of changes in business practices and theoretical advances that have been made. Rather than a neoclassical market was now viewed as the web of relationship with many independent suppliers and customers. The firm is embedded in an

enabling, and at the same time constraining, business network that includes actors engaged in a wide variety of interdependent relationships. Internationalization is seen as the outcome of firm actions to strengthen network positions by what is traditionally referred to as improving or protecting their position in the market. As networks are borderless, the distinction between entry and expansion in the foreign market is less relevant, given the network context of the revised model (Johanson&Vahlne, 2009). The figure below shows a visual of the revisited U model.

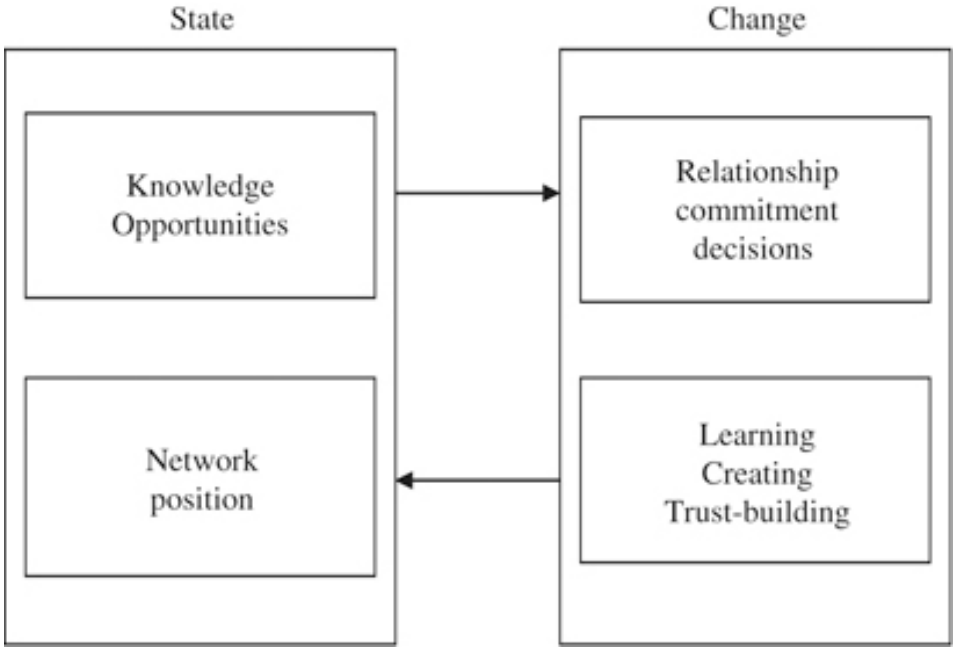


Fig. 3: U-model revisited (Johanson&Vahlne, 2009)

Although the structure of the model is same as before they have added components knowledge and recognition of opportunity in place of market communication, indicating opportunity to be the most important element of the body of knowledge driving the process. In place of market communication the word relationship is mentioned indicating the importance of network in internationalisation. The change from current activities to learning, creating and trust building has made it more explicit.

4.3 Resource based approach to Internationalisation

The resource based approach to internationalisation is developed within the field of strategic management based on the sources; seminal writing on business strategy by K. Andrews (1971) & A. Chandler (1962) and the theory on growth of the firm by Edith Penrose (1959). The resource based view of strategic management focuses on sustainable and unique costly to copy attributes of firms as a source of economic rent i.e. as the fundamental drivers of the performance and sustainable competitive advantage needed for internationalisation (page 19 (Matlay, 2006)). A firm's ability to attain and keep profitable market positions depend on it ability to gain and defend advantageous positions in regard to relevant resources important to the firm (Conner 1991). Resource based approach helps firms to have a competitive advantage by recognizing the advantages of knowledge based resources. However according to the characteristics described by different authors the resources in general are the tangible and intangible resource acquired by the firm which are converted into different products using other resources or mechanisms. Ahokangas (1998) assumes that SMEs are dependent on the development potential of key internal and external resources, which can be adjusted/developed within the firm and between firms and their environment. In 1998 Akokangas suggested a model of resource adjustment.

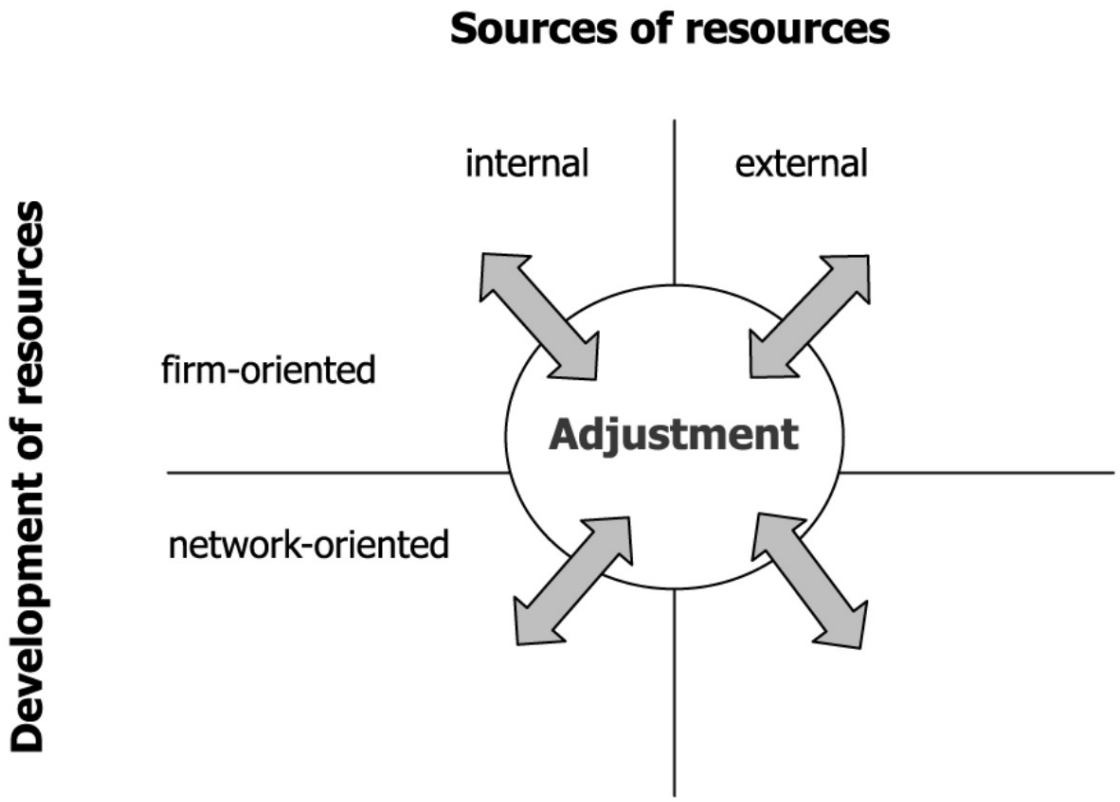


Figure 4: Mode of resource adjustment (Ahokangas 1998)

This is the model proposed by Ahokangas for the resource approach to internationalisation. The model shows that firms may pursue different internationalisation development strategy with different international activities over time differing from firm oriented to network oriented. The model shows the internal and external resources that can be adjusted according to the strategy and in order to achieve comparative advantage. The Akhokangas suggested model relates the network approach with the resource based approach for internationalisation with the firms analysing the internal and external resources available and adjusting the resources to attain strategic development.

By implementing this model international SMEs will be able to gain a comparative advantage in the energy market in Nepal with the availability of the important aspects; resource and network.

4.4 Network Approach of Internationalisation

Network approach is one of the ways to analyse internationalisation within a process approach is to use the approach as the starting point since this approach provides an appropriate framework for understanding firms as embedded actors in business networks (Johannsson & Mattson 1993; McAuley 1999). After the U-model Johannson and Vahlne continued their research on internationalisation from a network perspective which emphasized on gradual learning and development of market knowledge through interaction within the networks. They considered the analysis of the firm's network through micro and macro perspective; micro networks referring to firm to firm relationship and macro referring to firm to network relationship. Through this approach Johannson & Mattson (1993) identified four stages of internationalisation; the early starter, the late starter, the lonely international and the international among others.

Their theory explains the process of internationalisation which starts by creating a network with a primarily domestic firm and further developing relationships with connection to other networks, acquiring knowledge and exploiting the established networks. There are certain criticisms to this approach in regard to different types of relation, trust, control, resources and their interdependency. However, according to Jaklic (1988) networks can be especially useful for the SMEs in catching up economies since it is possible to overcome the problems of knowledge, technology and capital accumulation. Bonaccorsi (1992) also illustrated that small firms trade and acquire information with one another through their social network, leading them to imitate one another and speeding up the export entry.

Network approach is one of the best methods to start internationalisation in the Nepalese market. Relationship building is an essential part of doing business in Nepal with the market and a firms state is highly influenced by the network they posses. By approaching a primary local partner international energy SMEs can exploit the established network positions with minimal need for knowledge development and adjustment in the energy market in Nepal. Numerous

researches have been done previously proving the importance of network in internationalisation. Internationalisation of the small firms is driven by the networks they develop who also influence their entry mode decisions and choice of markets (Moen & Servain, 2002). This approach will be a really important aspect in entering the Nepalese energy market. This is also influenced by the culture as networks play an important role in business

Along with the network approach the resource based approach to internationalisation is also suitable and can be implemented in the context of the energy market in Nepal.

5 RESEARCH METHODOLOGY

A mixed method research was used implementing two research strategies: Archival research strategy and Survey strategy which were used as the framework for data collection according to the requirements of the research questions and the objective of the thesis.

5.1 Mixed method research

With the context of the thesis, mixed method research approach was used. A mixed methods research is a research design in which both (Khanal, 2009) quantitative and qualitative data's are combined in various ways that range from convergent form or fully integrated form (Saunders;Lewis;& Thornhill, 2012). The ways in which quantitative and qualitative research maybe combined, as well as the extent to which it may occur, has led to identification of number of dimensions and characteristics of mixed methods research (Creswell and Plano Clark 2007; Nastasi et al. 2010).

The different research methods used individual/mono research have limitations whereas using the mixed method would expand the boundaries allowing meaning and findings to be elaborated, enhanced, clarified, illustrative and linked. (Saunders;Lewis;& Thornhill, 2012)The use of mixed method helps to establish the credibility of the study and to produce a more complete data.

Using different kinds of method also helps to understand social complexity better. This method also helps to combine data from different research and collaborate with them to come to a conclusion. (Saunders;Lewis;& Thornhill, 2012)The reason behind selection of the mixed method of research is explained by the importance and benefits mentioned above. The research is based on analyzing the current situation of an industry and entering a new foreign market, therefore mixed method also helped to explain social complexity better. The methods used made the process smooth and efficient using the appropriate research method at different stages with different requirements.

5.2 Research Strategy

Research strategy is the methodological link between your philosophy and subsequent choice of methods to collect and analyze data (Denzim and Lincoln, 2005). A research strategy is based on the ability or characteristics of to suit your research in order to answer the research questions and meet your objectives.

A combination of two research strategies were used in the thesis; Archival research strategy and survey strategy. An archival research strategy makes use of administrative records and documents as the principal source of data which refers to recent as well as historical data (Bryman, 1989). The data collected from this strategy is the part of reality being studied where the product of day to day activity are analyzed (Hakim, 2000). The major advantage of the strategy was it allows the research questions which focus over the past and changes over the time to be answered. In the research, with research questions and objective in mind various data were collected from administrative records and documents as a principal source of data, for example data's from the Government of Nepal, Nepal Electricity Authority, UN were extracted as the primary source of data. The data collected were both in quantities and qualitative form.

On the other hand, the survey strategy is a popular and common strategy used in business and management and is usually associated with the deductive

research approach (Saunders;Lewis;& Thornhill, 2012). In this research the survey, the questionnaire data collection technique was used with standardized questions as it helped in the collection of standardized data from a sizeable population in an economic way which leads to easy comparison. The survey strategies gives you more control over the research process and are used to generate findings representative of the whole population.

A survey was conducted through social media. The questionnaires were prepared and posted in a Facebook group of Nepalese students in Finland on February 18, 2014. The respondents were from the age group of 20-30 with minimum education of high school degree. The respondents all had at least brief knowledge on the topic of foreign investment and internationalization giving the research a strong position on its liability. In a space of 1 week the survey was able to attract 35 respondents in this research with the following closed ended questions:

- Do you think Nepal has the possibility to attract foreign investors in the energy industry?
- According to your perspective does foreign investment help in the development of Nepal economically and socially?
- What do you think are the obstacles for investment in Nepal?
- Do you know about the subsidies provided by the Government of Nepal for foreign investors operating in the renewable energy sector?
- What type of company would you prefer to internationalize in Nepal?
- In what scale do you think foreign investment will help in the development of Nepal?
- Do you think there is a possibility of transferring technology and knowledge from a developed country like Finland to Nepal in the Nepalese energy market?

The survey was conducted through social media; facebook attracting 35 respondents with standardized answers. The results to the survey are mentioned in the analysis part.

5.3 Data Collection

The data were collected for the thesis through a mixed method research system. The strategies applied were archival and survey strategy with primary and secondary data from different sources.

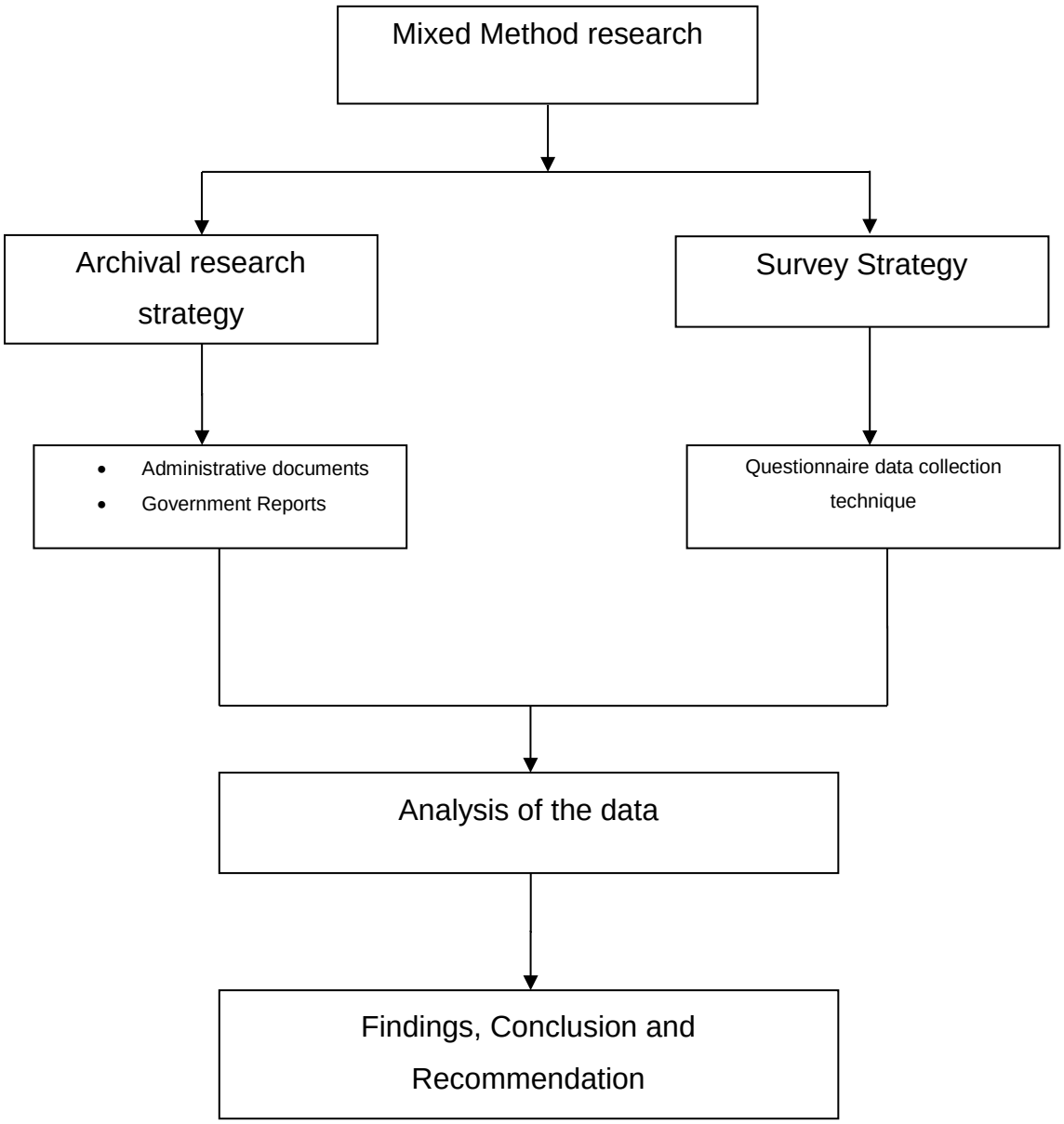


Fig 5: Thesis data collection framework

5.3.1 Primary Data

Primary data are the data collected specifically for the research project being undertaken (Saunders;Lewis;& Thornhill, 2012). It is the data collected based on the objective of your research. There are various methods of primary data collection. Among various methods, Interview and questionnaires was used as the source of primary data collected for the research.

The primary data in this research was collected using the survey strategy. Questionnaire data collection technique was used belonging to the survey strategy.

Questionnaires is the method of data collection in which each person is asked to respond to same set of questions in a predetermined manner (deVaus, 2002).Questionnaires is one of the most widely used method in data collection as it is efficient way of collecting data from large sample prior to quantitative analysis. The questionnaires conducted through this thesis were to analyze the mentality of the local residents in the target country towards foreign investment. The questionnaires were promoted through social media: facebook.

5.3.2 Secondary Data

Archival research strategy was used for the collection of secondary data with administrative documents and government reports as the principal source. The thesis is more based on secondary data. Secondary data is the data that include both raw data and published summaries that has already been collected for some other purpose (Saunders;Lewis;& Thornhill, 2012). Secondary data include both qualitative and quantitative data and are used in both descriptive and explanatory research.

5.4 Limitation

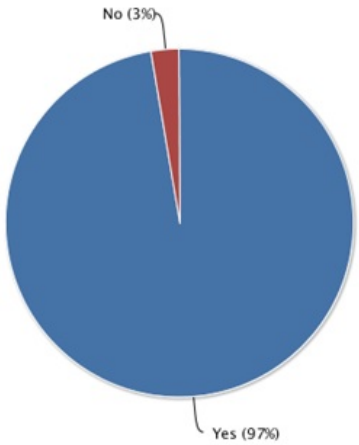
The data collected through the archival strategy were not always up to date especially in the case of reports published by GON. There were certain data which was not consistent in all sources. Due to the lack of exposures and connection with the outer world there is a possibility that even the reports published by the government might exclude the data of the rural areas of Nepal.

Whereas, while employing the survey strategy the data collected were not widely ranged as it was collected among the Nepalese community residing in Finland with limited number of respondents. The questionnaire data collection technique in the survey strategy works best with standardized questions which works by expecting the same results from all respondents.

6 ANALYSIS

The research explains the current energy market situation in Nepal, the opportunities present in the market and the possibilities of international SMEs to internationalize in developing country Nepal. As the information clearly states there is a huge market for energy SMEs in a developing market like Nepal. There is a big demand for energy sources in the target market. The thesis also states the availability of resources required for the product which are unutilized. The resources have not been able to be utilized due to lack of technology and infrastructure.

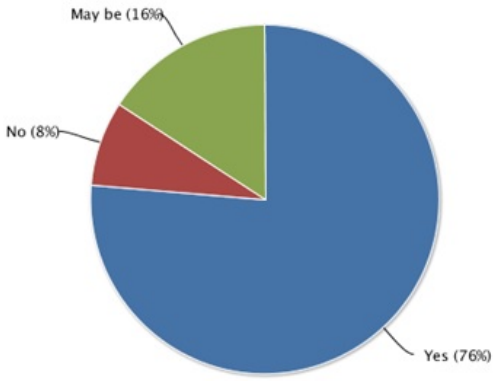
Do you think Nepal has the possibillity to attract foreign investment in the energy industry?



Order	Answer	Responses	Percent
1	Yes	37	97%
2	No	1	3%
	Total	**38**	**100%**

The lack of technology and infrastructure is a loop hole for the international firms to enter and utilize the opportunity. With the technology and innovation international firms would be able to make a significant impact on the energy market in Nepal. With high demands in the market, according to the result of the research, 97% of the people think there is a possibility to attract foreign investors in the energy sector in Nepal.

According to your perspective, does foreign investment help in development of Nepal economically and socially?



Order	Answer	Responses	Percent
1	Yes	29	76%
2	No	3	8%
3	May be	6	16%
	Total	**38**	**100%**

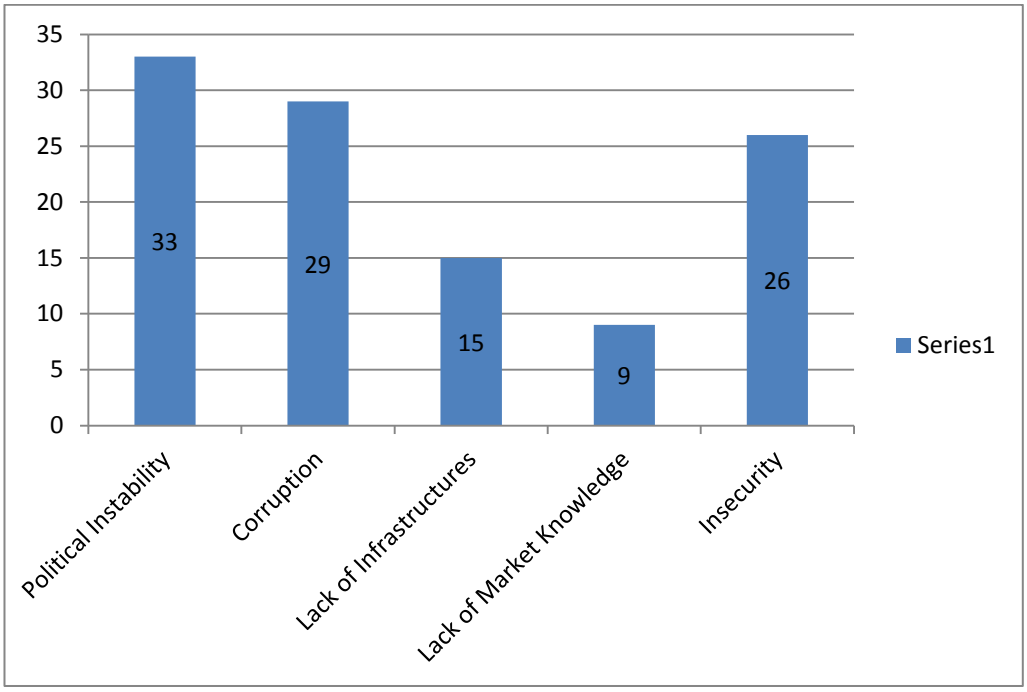
There is also the belief among the local population that FDI can help their country develop in both economically and socially. The result states the openness of the target market towards foreign investors.

The requirement for the international SMEs in relation to the network approach is to establish a network with a local partner who can provide them with the market knowledge and additional information related to the energy industry. The appropriate way to enter the Nepalese market would be through local partners in Nepal whom previously have done research on similar projects. As stated in the U-model gradual acquisition, integration and use of knowledge about foreign market and operation and on the incrementally increasing commitment to foreign market (Johansson & Vahlne, 1977) the firms can enter the market. The information available through local partner's research will help the firms to establish and give a direction for the production phase, for example the appropriate size of wind turbines. Using the network approach also uses the resource based approach hand in hand as explained by the Ahokangas model of resource adjustment. The international firms will have the opportunity to acquire the resources available through the network approach giving them a comparative advantage. An example of this would be the law implemented by

the GON: To attract foreign investor the government of Nepal has introduced policies to encourage investment in this sector. According to the Nepal Budget 2070, there is 100% tax exempt to the institutions licensed to generate, transmit and distribute electricity and 50% rebate on subsequent 3 years.

The questionnaires resulted in the local people welcoming the foreign investment. They believe foreign investment can play a major role in development of the country. They are more willing to invite sustainable businesses to invest. According to the locals political instability is the major reason for lack of foreign investors with corruption and insecurity among the other reasons. All the respondents agree with the statement of technology transfer from a developed country to a least developed country like Nepal. The respondents also appreciate the efforts made by the local government to attract the foreign investors. The respondents identified political instability, corruption and insecurity as the major problems for international SMEs to internationalize in Nepal.

What do you think are the major obstacles for foreign investment in Nepal?



The figure shows the major challenges for the SMEs with the option of selecting multiple answers. With the maximum amount of respondents accounting Political instability, 29% as the main problem with 25% blaming corruption and 23% going for the insecurity.

SWOT Analysis

Strength	**Weakness**
• Tax exemption by GON • Availability of required technology and resources with international SMEs • Willingness to internationalize • Reliable Partners • Local Community Support	• Lack of proper research and knowledge on the market • Lack of infrastructure in the target market • Lack of local human resources
Opportunity	**Threat**
• Abundance potential for energy, great discrepancy between available versus demanded energy • Opportunity to internationalize in nearby markets • Achieve comparative advantage though network approach.	• Competition from other foreign investors • Corruption and instable government • Bureaucratic complications • Repatriation of profit from Nepal is known to be challenging

Fig 6: SWOT Analysis of Finnish SMEs internationalizing in Nepal

The SWOT analysis shows the situation of international energy SMEs to internationalize in the Nepalese market. Starting with the strength the tax exemption provided by the government of Nepal for sustainable energy is a major strength with availability of resources and the willingness of the international SMEs to internationalize. The process further strengthens with the support of the local community for clean energy and potential reliable local partners.

Lack of enough research and knowledge along with inaccurate data might be a weakness. The lack of infrastructure within the target market country will act as a weakness with a potential of having many problems. There is also the lack of special human resource in the energy industry.

The major opportunity is the excessive demand present in the target market along with the prospect to internationalize in nearby countries market. The firms also have the opportunity to achieve comparative advantage using a combination of network and resource based approach to internationalization.

There are many foreign companies working in the energy sector in Nepal who might be a major competitor creating threat. Government Instability and Corruption are also a major threat with possibilities of bureaucratic delays, problem during licensing and other administrative tasks. The repatriation of the threat might also be a major threat for the international investors as the GON has policies to stop money from going out of the country.

7 CONCLUSION

The research answers provide the view of the energy market in Nepal as a paradise for the foreign investors in the energy industry. The country has very high demand for energy in comparison to the supplies. Even the population in urban areas experience power cut for up to 14 hours a day. The electricity is supplied through one government affiliated organization, NEA which has not

been able to reach the whole population. Although Nepal has big potential for renewable sources of energy; solar, wind and hydro the efforts made in these sectors are not enough.

Nepal is a developing country with a big problem in the supply of electricity. The resources are available which are unutilized granting an opportunity for the international SMEs to enter the market. The subsidies and tax exemption provided by the government of Nepal assists the firms to internationalize. The local people are welcoming the investments in these sectors and are ready to provide the help required.

Along with the opportunity and help provided from the government there are some major obstacles present for the foreign investors. These obstacles are in the form of political instability and corruption. Nepal has not been able to instate a stable government which in turn is affecting the investors with changes in policies and officials. Another big obstacle is the corruption which has been existent in Nepal for a long time. This has high impact on foreign investors repelling them from investing in the country. After being aware and possibility finding solutions of the present obstacles the firms have to decide on the appropriate strategy of entering the market.

One of the ways of entering the market is through the transfer of technology. In order for Technology transfer to successfully take place technological brokers should be used. The idea of technology breaking is to spam multiple industries to see how existing technologies could be used to create breakthrough innovation in other markets (Hargadon, 2003). Technology brokers have discovered how to bridge the disparate worlds they move among outside their boundaries and how to build new ventures from the technologies and people they come across. In the process, they have developed four intertwined work practices that help them do this: capturing good ideas, keeping ideas alive, imagining new uses for old ideas, and putting promising concepts to the test (Hardagon, 2003).

Another appropriate way for the companies to enter the market would be through the combination of network approach and resource based approach of internationalization which will give them an extra edge on acquiring knowledge of the local market. This will provide the firm with all necessary knowledge on the market and the system as a whole. This helps the firms to establish credibility with their partners and get access to the strategic resource. The findings and the new U-model (Johannson and Varne, 2009) explains the importance of the network in the process of internationalization. Through this method the international firms acquire resource through the network oriented approach as mentioned in the mode of research adjustment (Ahokangas 1998). Applying this method of entering the firms will be able to enter the market with resources and network.

The companies also have the possibility as entering the market as a sustainable business which provides and in turn also contributes to the development of the target market. This would give the firms the comparative advantage in the form of reputation as a socially responsible firm. The firm also will have further opportunities to acquire capital from the government and other organizations contributing to the development of the country. For example the GON provides tax and VAT discounts on solar panels at almost 30% deduction price.

7.1 Example of International SME willing to internationalise in a developing country: Finnwind

Finnwind is a Finnish technology company established in 1993 which manufactures and markets distributed power production systems. The company assembles the small wind turbines and the products for solar energy are imported from Germany. They serve various customers from system specification to turn key- services. They also serve the Finnish market with network of sales and assembly partners. The company operates with a 10 man team.

I was able to contact the company through an email with Mattias Peräinen and able to get the following response:

Do you have any plans to expand your company through internationalization in the future?

- Yes, we have. Time scale would be +12 months. At the moment we have ready products (a wind turbine, off grid solutions) but not enough capital resources.

How and where do you think are the best markets for expansion of your products?

- Our products suits best to the places having problems with grid. (No grid or unstable grid)

Would you be interested in internationalizing in developing countries? Such as Nepal where there is lack of electricity with up to 15hrs of power cut/day?

- Developing countries are high place in our focus.

What do you think would be a challenge if you decide to internationalize?

- We already have some knowledge, but still not enough. So capital and knowledge of the local environment such as laws, certificate, partners, etc would be our major challenge for internationalization.

According to the response Finnish SMEs: Finnwind are interested to internationalize with developing countries as their major focus. They have plans and are looking forward to internationalize and take their companies to the next level while tackling the obstacles with lack of capital and efficient knowledge on the target environment.

7.2 Implications for further research

The conclusion from this thesis opens a big door for further research. The energy situation of Nepal can be studied in depth with more information on electricity supply patterns, grids availability, the exact data on solar and wind energy in difference regions, competitors, government policies, diplomatic relations among the countries.

Business theories are being upgraded on a regular basis, which have to be considered during the further research. For example the internet age have brought huge changes to strategies of companies. The constant changes of technology also have to be taken into account.

Another factor to consider for further research is the collection of data from secondary sources related to Nepal. The secondary data collected on the information about different factors in Nepal in this research have decreased the credibility of the research.

Another prospective for further research would be to carry out a research based on case studies of the international firms operating in Nepalese energy market. This would add to the present research will more clarification, knowledge and data.

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